

Rec'd PCT/PTO 25 APR 2005

**RAW SEQUENCE LISTING**

The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) no errors detected.

Application Serial Number: 10/507,237A  
Source: P4/10  
Date Processed by STIC: 10/25/05

***ENTERED***

Rec'd PCT/PTO 25 APR 2005



PCT

RAW SEQUENCE LISTING

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:36

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

4 <110> APPLICANT: Emini, Emilio A.  
5 Shiver, John W.  
6 Casimiro, Danilo R.  
7 Bett, Andrew J.  
8 Liang, Xiaoping  
9 Fu, Tong-Ming  
11 <120> TITLE OF INVENTION: METHOD OF INDUCING AN ENHANCED IMMUNE  
12 RESPONSE AGAINST HIV  
14 <130> FILE REFERENCE: 21051YP  
16 <140> CURRENT APPLICATION NUMBER: 10/507,237A  
17 <141> CURRENT FILING DATE: 2004-09-09  
19 <150> PRIOR APPLICATION NUMBER: PCT/US03/07727  
20 <151> PRIOR FILING DATE: 2003-03-12  
22 <150> PRIOR APPLICATION NUMBER: 60/363,807  
23 <151> PRIOR FILING DATE: 2002-03-13  
25 <160> NUMBER OF SEQ ID NOS: 5  
27 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
29 <210> SEQ ID NO: 1  
30 <211> LENGTH: 1521  
31 <212> TYPE: DNA  
32 <213> ORGANISM: Artificial Sequence  
34 <220> FEATURE:  
35 <223> OTHER INFORMATION: Codon optimized DNA encoding human HIV-1 gag  
37 <400> SEQUENCE: 1  
38 atgggtgcta gggcttctgt gctgtctggt ggtgagctgg acaagtggga gaagatcagg 60  
39 ctgaggcctg gtggcaagaa gaagtacaag ctaaagcaca ttgtgtgggc ctccagggag 120  
40 ctggagaggt ttgctgtgaa cctggcctg ctggagacct ctgaggggtg caggcagatc 180  
41 ctgggccagc tccagccctc cctgcaaaca ggctctgagg agctgaggtc cctgtacaac 240  
42 acagtggcta ccctgtactg tgtgcaccag aagattgatg tgaaggacac caaggaggcc 300  
43 ctggagaaga ttgaggagga gcagaacaag tccaagaaga aggcccagca ggctgctgct 360  
44 ggcacaggca actccagcca ggtgtcccag aactaccca ttgtgcagaa cctccagggc 420  
45 cagatggtgc accaggccat ctcccccg accctgaatg cctgggtgaa ggtggtggag 480  
46 gagaaggcct tctcccctga ggtgatcccc atgttctctg ccctgtctga gggtgccacc 540  
47 ccccaggacc tgaacaccat gctgaacaca gtggggggcc atcaggctgc catgcagatg 600  
48 ctgaaggaga ccatcaatga ggaggctgct gagtgggaca ggctgcatcc tgtgcacgct 660  
49 ggccccattg cccccggcca gatgaggag cccaggggct ctgacattgc tggcaccacc 720  
50 tccacctcc aggagcagat tggctggatg aacaacaacc cccccatcc tgtgggggaa 780  
51 atctacaaga ggtggatcat cctgggcctg aacaagattg tgaggatgta ctccccacc 840  
52 tccatcctgg acatcaggca gggccccaag gagcccttca gggactatgt ggacaggttc 900  
53 tacaagacc tgagggctga gcaggcctcc caggaggtga agaactggat gacagagacc 960  
54 ctgctggtgc agaatgcaa ccctgactgc aagaccatcc tgaaggccct gggccctgct 1020  
55 gccacctgg aggagatgat gacagcctgc caggggggtg ggggccctgg tcacaaggcc 1080  
56 agggctgctg ctgaggccat gtcccagggt accaactccg ccaccatcat gatgcagagg 1140

P.6

## RAW SEQUENCE LISTING

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:36

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

```

57 ggcaacttca ggaaccagag gaagacagtg aagtgttca actgtggcaa ggtgggccac 1200
58 attgccaaga actgtagggc ccccaggaag aagggtgct ggaagtgtgg caaggaggcc 1260
59 caccagatga aggactgcaa tgagaggcag gccacttcc tgggcaaaat ctggccctcc 1320
60 cacaagggca ggcctggcaa ctccctccag tccaggcctg agcccacagc ccctcccag 1380
61 gagtccttca ggtttgggga ggagaagacc acccccagcc agaagcagga gccattgac 1440
62 aaggagctgt accccctggc ctccctgagg tccctgtttg gcaacgaccc ctccctcccag 1500
63 taaaataaag cccgggcaga t 1521
64
65 <210> SEQ ID NO: 2
66 <211> LENGTH: 37474
67 <212> TYPE: DNA
68 <213> ORGANISM: Artificial Sequence
69
70 <220> FEATURE:
71 <223> OTHER INFORMATION: DNA encoding pMRKAd5 HIV-1 gag, coding
72
73 <400> SEQUENCE: 2
74 ttcttaatta acatcatcaa taatatacct tattttggat tgaagccaat atgataatga 60
75 gggggtggag tttgtgacgt ggcgcggggc gtgggaacgg ggcgggtgac gtagtagtgt 120
76 ggcggaagtg tgatgttgca agtgtggcgg aacacatgta agcgacggat gtggcaaaag 180
77 tgacgttttt ggtgtgcgcc ggtgtacaca ggaagtgaca attttcgcgc ggttttaggc 240
78 ggatgttgta gtaaatttgg gcgtaaccga gtaagatttg gccattttcg cgggaaact 300
79 gaataagagg aagtgaaatc tgaataattt tgtgttactc atagcgcgta atatttgtct 360
80 agggcgcggg ggactttgac cgtttacgtg gagactcgcc cagggtgttt tctcagggtg 420
81 tttccgcggt cccgggtcaaa gttggcggtt tattattata ggcggcccgcg atccattgca 480
82 tacgttgat ccatatcata atatgtacat ttatattggc tcatgtccaa cattaccgcc 540
83 atgttgacat tgattattga ctagttatta atagtaatca attacggggg cattagttca 600
84 tagcccatat atggagttcc gcgttacata acttacggta aatggcccgc ctggctgacc 660
85 gcccaacgac ccccgcccat tgacgtcaat aatgacgtat gttcccatag taacgccaat 720
86 agggactttc cattgacgtc aatgggtgga gtatttacgg taaactgccc acttggcagt 780
87 acatcaagtg tatcatatgc caagtacgcc ccctattgac gtcaatgacg gtaaatggcc 840
88 cgctggcat tatgcccagt acatgacctt atgggacttt cctacttggc agtacatcta 900
89 cgtattagtc atcgctatta ccatgggtgat gcgggttttg cagtacatca atgggcgtgg 960
90 atagcgggtt gactcacggg gatttccaag tctccacccc attgacgtca atgggagttt 1020
91 gttttggcac caaaatcaac gggactttcc aaaatgtcgt aacaactccg cccattgac 1080
92 gcaaatgggc ggtaggcgtg tacggtggga ggtctatata agcagagctc gtttagtgaa 1140
93 ccgtcagatc gcctggagac gccatccacg ctgttttgac ctccatagaa gacaccggga 1200
94 ccgatccagc ctccgcggcc ggaacgggtg cattggaacg cggattcccc gtccaagag 1260
95 tgagatctac catgggtgct agggcttctg tgctgtctgg tggtagctg gacaagtggg 1320
96 agaagatcag gctgaggcct ggtggcaaga agaagtacaa gctaaagcac attgtgtggg 1380
97 cctccagggg gctggagagg tttgctgtga accctggcct gctggagacc tctgaggggt 1440
98 gcaggcagat cctgggccag ctccagccct ccctgcaaac aggctctgag gagctgaggt 1500
99 ccctgtacaa cacagtggct accctgtact gtgtgcacca gaagattgat gtgaaggaca 1560
100 ccaaggaggc cctggagaag attgaggagg agcagaacaa gtccaagaag aaggcccagc 1620
101 aggctgctgc tggcacaggc aactccagcc aggtgtccca gaactacccc attgtgcaga 1680
102 acctccaggg ccagatggtg caccagcca tctccccccg gacctgaat gcctgggtga 1740
103 aggtgggtga ggagaaggcc ttctcccctg aggtgatccc catgttctct gccctgtctg 1800
104 aggggtgccac ccccaggac ctgaacacca tgctgaacac agtggggggc catcaggctg 1860
105 ccatgcagat gctgaaggag accatcaatg aggaggctgc tgagtgggac aggctgcatc 1920
106 ctgtgcacgc tggccccatt gccccggcc agatgagggg gccaggggc tctgacattg 1980
107 ctggcaccac ctccaccctc caggagcaga ttggctggat gaccaacaac cccccatcc 2040
108 ctgtggggga aatctacaag aggtggatca tctgggctc gaacaagatt gtgaggatgt 2100

```

## RAW SEQUENCE LISTING

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:36

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

```

109 actccccac ctccatcctg gacatcaggc agggcccaaa ggagcccttc agggactatg 2160
110 tggacagggt ctacaagacc ctgagggctg agcaggcctc ccaggagggtg aagaactgga 2220
111 tgacagagac cctgctggtg cagaatgcca accctgactg caagaccatc ctgaaggccc 2280
112 tgggccctgc tgccaccctg gaggagatga tgacagcctg ccaggggggtg gggggccctg 2340
113 gtacacaaggc caggggtgctg gctgaggcca tgtcccagggt gaccaactcc gccaccatca 2400
114 tgatgcagag gggcaacttc aggaaccaga ggaagacagt gaagtgcctc aactgtggca 2460
115 aggtgggcca cattgccaaag aactgtaggg cccccaggaa gaagggctgc tggaaagtgtg 2520
116 gcaaggaggg ccaccagatg aaggactgca atgagaggca ggccaacttc ctgggcaaaa 2580
117 tctggccctc ccacaagggc aggcctggca acttctcca gtccaggcct gagcccacag 2640
118 cccctcccga ggagtcttc aggtttgggg aggagaagac cacccccagc cagaagcagg 2700
119 agcccattga caaggagctg taccctctgg cctccctgag gtccctggtt ggcaacgacc 2760
120 cctcctccca gtaaaataaa gccgggcag atctgctgtg ccttctagtt gccagccatc 2820
121 tgttgtttgc cctcccccg tgccttctct gaccctggaa ggtgccactc cactgtcct 2880
122 ttcctaataa aatgaggaaa ttgcatcgca ttgtctgagt aggtgtcatt ctattctggg 2940
123 ggggtggggtg gggcaggaca gcaaggggga ggattgggaa gacaatagca ggcatgctgg 3000
124 ggatgcggtg ggctctatgg ccgatcggcg cgccgtactg aaatgtgtgg gctgtggctta 3060
125 aggtgggaa agaatatata aggtgggggt cttatgtagt tttgtatctg ttttgacgca 3120
126 gccgccgccc ccatgagcac caactcgttt gatggaagca ttgtgagctc atatttgaca 3180
127 acgcgcatgc ccccatgggc cgggggtgctg cagaatgtga tgggctccag cattgatggt 3240
128 cgccccgtcc tgcccgcaaa ctctactacc ttgacctacg agaccgtgtc tggaacgccc 3300
129 ttggagactg cagcctccgc cgccgcttca gccgctgcag ccaccgcccg cgggattgtg 3360
130 actgactttg ctttctgag cccgcttga aacagtgcag cttcccgttc atccgcccgc 3420
131 gatgacaagt tgacggctct tttggcaciaa ttggattctt tgaccggga acttaatgtc 3480
132 gtttctcagc agctgttggg tctgcgccag caggtttctg ccctgaaggc ttctcccct 3540
133 cccaatgcgg tttaaaacat aaataaaaaa ccagactctg tttggatttg gatcaagcaa 3600
134 gtgtcttgct gtctttattht aggggttttg cgcgcgcggt agggccggga ccagcggctc 3660
135 cggctcgttg gggctctgtg tattttttcc aggacgtggt aaaggtgact ctggatgttc 3720
136 agatacatgg gcataagccc gtctctgggg tggaggtagc accactgcag agcttcatgc 3780
137 tgcggggtgg tgtttagat gatccagtcg tagcaggagc gctgggctg gtgcctaaaa 3840
138 atgtctttca gttagcaagct gattgccagg ggcaggccct tgggtgaagt gtttaciaaag 3900
139 cggttaagct gggatgggtg catacgtggg gatatgagat gcatcttggg ctgtattht 3960
140 aggttggtca tgttcccagc catatccctc cggggattca tgttgtgcag aaccaccagc 4020
141 acagtgtatc cggtgactt gggaaatttg tcatgtagct tagaaggaaa tgcgtggaag 4080
142 aacttgaga cgccctgtg acctccaaga ttttccatgc attcgtccat aatgatggca 4140
143 atgggcccac gggcggcggc ctgggcgaag atatttctgg gatcactaac gtcatagttg 4200
144 tgttccagga tgagatcgtc ataggccatt tttaciaaag gcgggcggag ggtgccagac 4260
145 tgcggtataa tggttccatc cggcccaggg gcgtagttac cctcacagat tgcatttcc 4320
146 cacgctttga gttcagatgg ggggatcatg tctacctgcg gggcgatgaa gaaaacggtt 4380
147 tccggggtag gggagatcag ctgggaagaa agcaggttcc tgagcagctg cgacttaccg 4440
148 cagccgggtg gcccgtaaat cacacctatt accggctgca actggtagtt aagagagctg 4500
149 cagctgccgt catccctgag caggggggccc acttctgtaa gcatgtccct gactcgcag 4560
150 ttttccctga ccaaatccgc cagaaggcgc tcgccccca gcgatagcag ttcttgcaag 4620
151 gaagcaaagt ttttcaacgg tttgagaccg tccgcctgag gcatgctttt gagcgtttga 4680
152 ccaagcagtt ccaggcgtc ccacagctcg gtcaccctgct ctacggcatc tcgatccagc 4740
153 atatctctc gtttcgctgg tggggcggc tttcgtgta cggcagtagt cgggtctcgt 4800
154 ccagacgggc caggtcatg tctttccacg ggcgcagggt cctcgtcagc gtagtctgg 4860
155 tcacggtgaa ggggtgctc cgggctgcg cgctggccag ggtgcgcttg aggtggtcc 4920
156 tgctggtgct gaagcgtgc cggctctcgc cctgcgcgtc ggccaggtag catttgacca 4980
157 tgggtgcata gtccagcccc tccgcggcgt ggccttggc gcgcagcttg cccttgagg 5040

```

## RAW SEQUENCE LISTING

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:36

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

```

158 aggcgcccga cgaggggag tgcagacttt tgagggcgta gagcttgggc gcgagaaata 5100
159 ccgattccgg ggagtaggca tccgcgccgc aggccccgca gacggtctcg cattccacga 5160
160 gccaggtgag ctctggccgt tccgggtcaa aaaccagggt tccccatgc tttttgatgc 5220
161 gtttcttacc tctggtttcc atgagccggg gtccacgctc ggtgacgaaa aggctgtccg 5280
162 tgtccccgta tacagacttg agaggcctgt cctcgagcgg tgttccgagg tcctcctcgt 5340
163 atagaaactc ggaccactct gagacaaagg ctccgctcca ggccagcacg aaggaggcta 5400
164 agtgggaggg gtagcggctg ttgtccacta gggggtccac tcgctccagg gtgtgaagac 5460
165 acatgtcgcc ctcttcggca tcaaggaagg tgattggttt gtaggtgtag gccacgtgac 5520
166 cgggtgttcc tgaagggggg ctataaaagg ggggtggggc gcgttcgtcc tcaactctct 5580
167 ccgcatcgct gtctgcgagg gccagctggt ggggtgagta ctccctctga aaagcgggca 5640
168 tgacttctgc gctaagattg tcagtttcca aaaacgagga ggattgata ttcacctggc 5700
169 ccgcggtgat gcctttgagg gtggccgcat ccatctggtc agaaaagaca atcttttgt 5760
170 tgtcaagctt ggtggcaaac gaccctaga gggcgttggg cagcaacttg gcgatggagc 5820
171 gcagggtttg gtttttgcg cgatcggcgc gctccttggc cgcgatggtt agctgcacgt 5880
172 attcgcgcgc aacgcaccgc cattcgggaa agacgggtgg gcgctcgtcg ggcaccagg 5940
173 gcacgcgcca accgcggttg tgcaggggta caaggtaaac gctggtggct acctctccgc 6000
174 gtaggcgctc gttggtccag cagaggcggc gcctctgcg cgagcagaat ggcggtagg 6060
175 ggtctagctg cgtctcgtcc ggggggtctg cgtccacggg aaagaccccg ggcagcaggc 6120
176 gcgctcga gtagtctatc ttgcatcctt gcaagtctag cgctcgtgc catgcgagg 6180
177 cggcaagcgc gcgctcgtat ggggtgagtg ggggaccca tggcatggg tgggtgagcg 6240
178 cggaggcgta catgccgcaa atgtcgtaaa cgtagagggg ctctctgagt attccaagat 6300
179 atgtagggta gcatcttcca ccgcgatgc tggcgcgac gtaatcgtat agttcgtgcg 6360
180 agggagcgag gaggtcggga ccgaggttgc tacgggcggg ctgctctgct cggaagacta 6420
181 tctgcctgaa gatggcatgt gagttggatg atatggttg acgctggaag acgttgaagc 6480
182 tggcgtctgt gagacctacc gcgtcacgca cgaaggaggc gtaggagtcg cgcagcttgt 6540
183 tgaccagctc ggcggtgacc tgcacgtcta gggcgcagta gtccagggtt tccttgatga 6600
184 tgtcatactt atcctgtccc tttttttccc acagctcgcg gttgaggaca aactcttgcg 6660
185 ggtctttcca gtactcttg atcggaaacc cgtcggcctc cgaacggtaa gacctaagca 6720
186 gttagaactg gttgacggcc tggtaggcgc agcatccctt ttctacgggt agcgcgatg 6780
187 cctgcgcggc cttccggagc gaggtgtggg tgagcgcaaa ggtgtccctg accatgactt 6840
188 tgaggtactg gtatttgaag tcagtgtcgt cgcacccgct ctgctcccag agcaaaaagt 6900
189 ccgtgcgctt tttggaacgc ggatttggca gggcgaagg gacatcgttg aagagtatct 6960
190 ttcccgcgag aggcataaag ttgctgtgta tgcggaagg tcccggcacc tcggaacggt 7020
191 tgtaattac ctgggcggcg agcacgatct cgtcaaagcc gttgatgttg tggcccaca 7080
192 tgtaaagttc caagaagcgc gggatgccct tgatggaagg caattttta agttcctcgt 7140
193 aggtgagctc ttcaggggag ctgagcccgt gctctgaaag ggcccagctc gcaagatgag 7200
194 ggttggaaag gacgaatgag ctccacagg caccggccat tagcatttgc aggtggtcgc 7260
195 gaaaggtcct aaactggcga cctatggcca tttttctgg ggtgatgcag tagaaggtaa 7320
196 gcgggtcttg tcccagcgg tcccaccaa ggttcgaggc taggtctcgc gcggcagtca 7380
197 ctagaggctc atctccgccc aacttcatga ccagcatgaa gggcacgagc tgcttcccaa 7440
198 agcccccat ccaagtatag gtctctacat cgtaggtgac aaagagacgc tcggtgcgag 7500
199 gatgcgagcc gatcgggaag aactggatct cccgccacca attggaggag tggctattga 7560
200 tgtggtgaaa gtagaagtc ctgcgacggg ccgaacactc gtgctggctt ttgtaaaaac 7620
201 gtgcgcagta ctggcagcgg tgcacgggtg gtacactctg caccaggttg acctgacgac 7680
202 cgcgcacaag gaagcagat gggaaattga gccctcgcg tggcgggtt ggctggtgg 7740
203 cttctacttc ggctgcttgt ccttgaccgt ctggctgctc gaggggagtt acggtggatc 7800
204 ggaccaccac gccgcgcgag cccaaagtcc agatgtccgc gcgaggcggc cggagcttga 7860
205 tgacaacatc gcgcagatgg gagctgtcca tggctggag ctcccgcggc gtcaggtcag 7920
206 gcgggagctc ctgcaggttt acctgcata gacgggtcag ggcgcgggct agatccagg 7980

```

## RAW SEQUENCE LISTING

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:36

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

```

207 gatacctaatttccaggggctgggttggtggcggcgtcgatggcttgcaagaggccgcattc8040
208 cccgcggcgcgactacggta ccgcgcggcgggcggtgggcgcgggggtgtccttgatg8100
209 atgcatctaa aagcggtgacgcgggcgagc ccccggaggt agggggggct ccggacccgc8160
210 cgggagagggggcaggggca cgtcggcgccgcgcgcgggcaggagctggtgctgcgcgcg8220
211 taggttgctgcgaacgcgacgcggcggttgatctcc tgaatctggcgcctctgct8280
212 gaagacgacggccccggtgacttgaaacctgaaagagagttcgacagaaatcaatttcggt8340
213 gtcggtgacgcggcctggcgcaaaatctctgcacgtctcctgagttgtcttgataggc8400
214 gatctcggccatgaactgctgatctcttcctcctggagatctccgcgtc8460
215 cacggtggcgcgaggtcgttgaaatgcggccatgagctcgagaaggcgttgaggcc8520
216 tccctcgttcagacgcggctgtagaccgcccccttcgcatcgcgggcgcgcacgac8580
217 caactgcgcagattgagctccacgtgcccggcgaagacgcgtagtttcgcaggcctg8640
218 aaagaggtagttgaggggtggtggcggtgtgttctgcccagagaagtacataaccagcg8700
219 tcgcaactggtattcgttgaatcccccaaggcctcaaggcgtccatgctcgtagaa8760
220 gtccacggcgaagttgaaaaactgggagttgcgcgccgacacggttaactcctcctccag8820
221 aagacggatgagctcggcgcagtgctgcgcacacctcgcgc tcaaaggctcaggggcctc8880
222 ttcttcttctcaatctcctctccataaggcctccccttcttcttctctggcgggcg8940
223 tgggggaggggggacacggcggcgacgacgcgcaccgggaggcggtcga caaagcgtc9000
224 gatcatctcccgcggcgacggcgcacgtctcggtgacgcgcggccgttctcgcggg9060
225 gcgcagttgaaagaccccgcctgcatgctccggttatgggttggcggggggctgccatg9120
226 cggcagggatcggcgctaaatgatgatctcaacaattgttgttaggta ctccgccgc9180
227 gagggacctgagcgagctccatcgaccggatcgaaaacctctcgagaaaggcgtctaa9240
228 ccagtcacagtcgcaaggta ggctgagcacctgtggcgggcggcagcgggcggcgtcggg9300
229 gttgtttctgscggaggtgctgctgatgatgtaattaaagtaggcggtcttgagacggcg9360
230 gatggtcgacagaagcacctgtccttgggtccggcctgctgaatgcgca ggcggtcggc9420
231 catgccccaggttctgtttgacatcggcgaggctctttgtagtagcttgcatgagcct9480
232 ttctaccggcacttcttctctctctctctctctctctctctctctctctctctctctct9540
233 ggcggcgggcaggtttggcgtaggtggcgcccccttctcccctgctgtgtgaccccgaa9600
234 gccctcatcggctgaagcaggctaggctggcgacaacgcctcggcta atatggcctg9660
235 ctgcaactgctgtagggtagactggaagtc atccatgtccacaaagcgggtggtatgcgcc9720
236 cgtgttgatggtgtaagtgcagttggccat aacggaccag ttaacggctctggtgacccgg9780
237 ctgcgagagctcgggtgtacc tgagacgcgataagccctc gactcaatacgtagctgtt9840
238 gcaagtccgaccaggtactggatcccacaaaaagtgcggcgggcggctggcggtagag9900
239 gggccagcgtagggtggccgggctccggggcgagatctccaacataa ggcatgata9960
240 tccgtagatgtacctggaca tccaggtgatgccggcgggcgtggtggaggcgcgggaaa10020
241 gtcgcggacgcggttccagatgtgcgcagcggcaaaaagtctccatggtcgggacgct10080
242 ctggccggtcaggcgcgcgaatcgttgacgctctagaccgtgcaaaaggagacctgta10140
243 agcgggcaacttcccggtggtctggtggataaattcgcaagggtatcatgctggacgaccg10200
244 gggttcgagc cccgtatccggcgtccgccgtgatccatgcggttaccgc ccgctgtctg10260
245 aaccaggtgtgcgacgtca gacaacgggggagtgctccttttggttcc tccaggcgc10320
246 ggcggctgctgcgctagctt ttttgccac tggccgcgcgcagcgtaaagggttaggctg10380
247 gaaagcgaagcattaagtgtctcgtcccgtagccgagggtattttccaagggttg10440
248 agtcgcgggacccccggttcgagctcggacccggccggactgcggcggaacgggggtttgc10500
249 ctccccgtctgcaagacctcgttgcaaa ttcctccggaacaggggacagcccccttt10560
250 ttgctttccagatgcatcaggtgcgcgcagatgcgc cccctctcagcagggca10620
251 agagcaagagcagcggcagacatgcagggcaccctcccctcctaccgcgtcaggagg10680
252 ggcgacatccgcgggtgacgcggcagcagatggtgattacgaacccccgcggcgccggg10740
253 ccggcactactggacttggaggagggcgggcctggcgcggtaggagcgcctctcc10800
254 tgagcggcaccaaggggtgagctgaagcgtgatacgcgtgaggcgtacgtgcccgggca10860
255 gaacctgttcgcgaccgcaggagagga gcccgaggagatgcgggatc gaaagttcca10920

```

RAW SEQUENCE LISTING ERROR SUMMARY      DATE: 10/25/2005  
PATENT APPLICATION: US/10/507,237A      TIME: 11:39:37

Input Set : A:\21051yp.txt  
Output Set: N:\CRF4\10252005\J507237A.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 34984

**VERIFICATION SUMMARY**

DATE: 10/25/2005

PATENT APPLICATION: US/10/507,237A

TIME: 11:39:37

Input Set : A:\21051yp.txt

Output Set: N:\CRF4\10252005\J507237A.raw

L:1940 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:5 after pos.:34980